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MARSHALL, GERSTEIN & BORUN LLP
ATTORNEYS AT LAW
6300 SEARS TOWER
233 SOUTH WACKER DRIVE
CHICAGO, ILLINOIS 60606-6357
(312) 474-6300
FAX: (312) 474-0448

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Confirmation: 6143
Applicants: Bowersock et al.
Filed: November 10, 2003
Title: METHOD OF VACCINATING VERTEBRATES
Art Unit: 1644
Examiner: Not yet assigned
Atty Docket: 28341/6127NDIV1
Customer No.: 04743
Enclosed is a copy of an Information Disclosure Statement and Form PTO-1449 (4 pages).

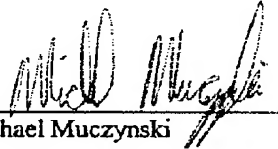
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Serial No.: 10/705,660)	I hereby certify that this paper and all
Confirmation: 6143)	documents referred to herein as being
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Applicants: Bowersock et al.)	United States Patent and Trademark Office
Filed: November 10, 2003)	via facsimile on February 9, 2004 at
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Title: METHOD OF VACCINATING)	
VERTEBRATES)	
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Art Unit: 1644)	
Examiner: Not yet assigned)	
)	
Atty Docket: 28341/6127NDIV1)	
Customer No.: 04743)	Michael Muczynski

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The patents and publications listed on the enclosed Form PTO-1449 are submitted pursuant to 37 CFR §§ 1.56, 1.97, and 1.98. Copies of the patents and publications are not supplied because they were previously submitted to the Patent Office in an information disclosure statement in compliance with 37 CFR §§ 1.98 (a)-(c), or cited by the Patent Office, in prior application no. 09/853,919, filed May 11, 2001 (now U.S. Patent No. 6,656,470), relied upon for an earlier effective filing date under 35 U.S.C. § 120.

Respectfully submitted,

MARSHALL, GERSTEIN & BORUN LLP

By: 

Michael Muczynski
Reg. No. 48,642
Attorney for Applicants

February 9, 2004

6300 Sears Tower
233 South Wacker Drive
Chicago, IL 60606
(312) 474-6300

Sheet 1 of 3

Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 28341/6127NDIV1	Serial No. 10/705,660
INFORMATION DISCLOSURE STATEMENT		Applicant Bowersock et al.	
		Filing Date November 10, 2003	Group 1644

U.S. PATENT DOCUMENTS							
*Examiner Initials	Document Number	Issue Date	Name	Class	Subclass	Filing Date if Appropriate	
	3,551,556	12/29/70	Kliment et al.	424	21		
	3,880,990	4/29/75	Bauer et al.	424	19		
	4,178,361	12/11/79	Cohen et al.	424	22		
	4,220,152	9/2/80	Dresback	128	260		
	4,352,883	10/5/82	Lim	435	178		
	4,391,909	7/5/83	Lim	435	178		
	4,673,566	6/16/87	Goosen et al.	424	19		
	4,689,293	8/25/87	Goosen et al.	435	1		
	4,780,315	10/25/88	Wu et al.	424	438		
	4,798,786	1/17/89	Tice et al.	435	177		
	4,803,168	2/7/89	Jarvis, Jr.	435	240.22		
	4,806,355	2/21/89	Goosen et al.	424	424		
	4,808,404	2/28/89	Bhogal	424	88		
	4,873,090	10/10/89	Clancy	424	451		
	5,075,109	12/24/91	Tice et al.	424	88		
	5,352,448	10/4/94	Bowersock et al.	424	438		
	5,674,495	10/7/97	Bowersock et al.	424	184.1		
	6,214,331	04/10/01	Vanderhoff et al.	424	78.17	12/12/97	

FOREIGN PATENT DOCUMENTS							
*Examiner Initials	Document Number	Publication Date	Country	Class	Subclass	Translation	
						Yes	No
	WO 85/00752 A	2/28/85	PCT				
	WO 95/02416	1/26/95	PCT				
	0 540 413 A1	5/5/93	EPO			Abstract only	
	0 188 309 A2	7/23/86	EPO				
	1-313437	12/18/89	JP			Abstract only	
	WO 98/46211	10/22/98	PCT				
	WO 01/00233	01/04/01	PCT				

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For m PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 28341/6127NDIV1	Serial No. 10/705,660
INFORMATION DISCLOSURE STATEMENT		Applicant	
		Bowersock et al.	
		Filing Date November 10, 2003	Group 1644

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)	
	Bowersock et al., "Evaluation of an orally administered vaccine, using hydrogels containing bacterial exotoxins of <i>Pasteurella haemolytica</i> , in cattle", <i>American Journal of Veterinary Research</i> , Vol. 55, No. 4, pp. 502-509 (1994)
	Bowersock et al., "Oral Administration of Mice with Ovalbumin Encapsulated in Alginate Microspheres", <i>Abstracts of Papers of the American Chemical Society</i> , Vol. 208 (1994)
	Bowersock et al., "Oral Vaccination of Animals Via Hydrogels", <i>Proceed. Intern. Symp. Control. Rel. Bioact. Mater.</i> , Vol. 21 (1994)
	Bowersock et al., "Uptake of Alginate Microspheres by Peyer's Patches", <i>Proceed Intern. Symp. Control. Rel. Bioact. Mater.</i> , Vol. 21 (1994)
	Offit et al., "Enhancement of Rotavirus Immunogenicity by Microencapsulation", <i>Virology</i> , Vol. 203, pp. 134-43 (1994)
	Suckow et al., "Stimulation of Immunity to <i>Pasteurella Multocida</i> in Rabbits by Oral Immunization Using a Microsphere Delivery System", <i>Proceed. Intern. Symp. Control. Rel. Bioact. Mater.</i> , Vol. 21 (1994)
	Jackson, R. "Alginate Microspheres for Oral Delivery of Vaccines" a Thesis Submitted to the Faculty of Purdue University (1995)
	Khoury et al., "Oral Inoculation of Mice with Low Doses of Microencapsulated, Noninfectious Rotavirus Induces Virus-Specific Antibodies in Gut-Associated Lymphoid Tissue", <i>The Journal of Infectious Diseases</i> , Vol. 172, pp. 870-74 (1995)
	Bowersock et al., "Administration of Ovalbumin Encapsulated in Alginate Microspheres to Mice", Chapter 6 in "Hydrogels and biodegradable polymers for bioapplications", <i>American Chemical Society</i> , pp. 58-66 (1996)
	Duncan et al., "Comparative analysis of oral delivery systems for live rotavirus vaccines", <i>Journal of Controlled Release</i> , Vol. 41, pp. 237-247 (1996)
	HogenEsch et al., "Systemic and pulmonary immune response to intrabronchial administration of ovalbumin in calves", <i>Veterinary Immunology and Immunopathology</i> , Vol. 51, pp. 293-302 (1996)
	Moser et al., "Aqueous-based microencapsulation enhances virus-specific humoral immune responses in mice after parenteral inoculation", <i>Vaccine</i> , Vol. 14, No. 13, pp. 1235-38 (1996)
	Moser et al., "Effect of microencapsulation on immunogenicity of a bovine herpes virus glycoprotein and inactivated influenza virus in mice", <i>Vaccine</i> , Vol. 15, No. 16, pp. 1767-72 (1997)
	Periwal et al., "Orally Administered Microencapsulated Reovirus Can Bypass Suckled, Neutralizing Maternal Antibody That Inhibits Active Immunization of Neonates", <i>Journal of Virology</i> , Vol. 71, No. 4, pp. 2844-50 (April 1997)
	Bowersock et al., "Induction of pulmonary immunity in cattle by oral administration of ovalbumin in alginate microspheres", <i>Immunology Letters</i> , Vol. 60, pp. 37-43 (1998)
	Cho et al., "Novel mucosal immunization with polysaccharide-protein conjugates entrapped in alginate microspheres", <i>Journal of Controlled Release</i> , Vol. 53, pp. 215-224 (1998)
	Jarvinen, "Mucosal Vaccination of Rabbits Against Pasteurellosis Using <i>Pasteurella multocida</i> Toxin (PT) and a Potassium Thiocyanate Extract of <i>P. multocida</i> (CN) Encapsulated in Sodium

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Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 28341/6127NDIV1	Serial No. 10/705,660
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		Filing Date November 10, 2003	Group 1644

	Alginate Microspheres" A Thesis Submitted to the Faculty of Purdue University, May, 1997, (released from confidentiality on 10/19/98)
	Moser et al., "Relative Importance of Rotavirus-Specific Effector and Memory B Cells in Protection against Challenge", <i>Journal of Virology</i> , Vol. 72, No. 2, pp. 1108-1114 (1998)
	Bowersock et al., "Oral vaccination of animals with antigens encapsulated in alginate microspheres", <i>Vaccine</i> , Vol. 17, pp. 1804-1811 (1999)
	MSDS for Alginic Acid, Sodium Salt by Acros Organics U.S.A. of Fair Lawn, New Jersey (6/4/99)
	Jarvinen et al., "Intranasal Vaccination of New Zealand White Rabbits Against Pasteurellosis, Using Alginate-Encapsulated <i>Pasteurella multocida</i> Toxin and Potassium Thiocyanate Extract", <i>Comparative Medicine</i> , Vol. 50, No. 3, pp. 263-269 (June 2000)
	Kidane et al., "The efficacy of oral vaccination of mice with alginate encapsulated outer membrane proteins of <i>Pasteurella haemolytica</i> and One-Shot®", <i>Vaccine</i> , Vol. 19, pp. 2637-46 (2001)
	Mittal et al., "Immunization with DNA, adenovirus or both in biodegradable alginate microspheres: effect of route of inoculation on immune response", <i>Vaccine</i> , Vol. 19, pp. 253-263 (2001)
	Product Bulletin for "Structured Foods with the Algin/Calcium Reaction: Kelco corp. (date unknown)
	International Search Report (PCT) dated February 14, 2002, mailed March 22, 2002, for PCT/US01/15235
	Chan et al., "Effect of cellulose derivatives on alginate microspheres prepared by emulsification", <i>J. Microencapsulation</i> , Vol. 14, No. 5, pp. 545-555 (1997)
	Lemoine et al., "Preparation and characterization of alginate microspheres containing a model antigen", <i>International Journal of Pharmaceutics</i> 176, pp. 9-19 (1998)
	C.J. Gray and J. Dowsett, "Retention of Insulin in Alginate Gel Beads" <i>Biotechnology and Bioengineering</i> , Vol. 31, pp. 607-12 (1988)

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